Statement Of
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To The Subcommittee On Science, Technology And Space
Committee On Commerce, Science And Transportation
U.S. Senate
Regarding The Fastener Quality Act

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Introduction

Good afternoon, I am Adrian Cockman, Senior Standards Engineer, of Ford Motor Company. I am speaking today on the behalf of Ford, the Alliance of Automobile Manufacturers (the Alliance) and the Association of International Automobile Manufacturers (AIAM). Together the Alliance and AIAM represent every major producer and importer of automobiles and light trucks in the U.S. market.

I appreciate the opportunity to appear before you today to urge you to amend the Fastener Quality Act (FQA). The automotive industry supports the principles embodied in the Commerce Department's recent report to Congress on fastener quality. We also support the two recently introduced bills, S.795 and H.R. 1183, which would amend the Fastener Quality Act. We urge the earliest possible enactment of legislation consistent with these bills, particularly in view of the June 24, 1999, effective date of regulations based on the current Fastener Quality Act.

The Auto Industry's Focus on Fastener Quality

Motor vehicle manufacturers have strong competitive incentives to ensure that all of the fasteners they use meet or exceed demanding standards for quality. The continuous need to increase customer safety and satisfaction long ago attuned motor vehicle manufacturers to the importance of quality. These factors have led to the implementation of extensive quality assurance programs to ensure that only high quality, safe components including fasteners are used in our products. These programs ensure much higher levels of fastener quality than the methods imposed by the current Fastener Quality Act.

My principal responsibility at Ford is the management of the Corporate Worldwide Fastener Standards System. This system controls all fasteners used by Ford Motor Company and its associated companies worldwide. Input to the Ford fastener system comes from Design Engineers, Fastener Engineers, Supplier Technical Assistance, and the Purchasing and Customer Service Division. All of these departments work together to develop state of the art standards in harmony with Ford's overall quality system, QS9000. This cooperative effort ensures that the high standards required by Ford are continuously met. And Ford's requirements are not unique; similar company standards and quality systems are used throughout the automotive industry.

The ability of a manufacturer to produce fasteners that consistently meet or exceed these high standards is very important. However, it is only one aspect of what the automotive industry considers to be quality. To be a quality supplier to the automotive industry, Ford requires that a supplier must not only supply parts that meet the standards, but also be able to (i) demonstrate continuous improvement and a reduction in variation and waste, (ii) immediately react to changes in requirements, (iii) be proactive, and (iv) supply the correct quantity of parts, packaged correctly and on time. Suppliers who meet all of these requirements are designated as Quality Suppliers. Automotive companies continually monitor quality in databases accessible to the suppliers. Any supplier unable to meet all of these requirements is removed from the automotive supply base.

Federal Legislation and Regulation Should Address Real Problems in an Efficient Manner

The Fastener Quality Act should address identified and documented fastener problems, and apply effective and efficient strategies for dealing with those problems. The remedial strategies should be closely tailored to the problem areas identified. This approach is consistent with the findings and recommendations of the Commerce Department's report, which concluded that fastener quality is already adequately addressed in major industrial and government procurement sectors. This approach is also embodied in the recent Senate and House bills, S. 795 and H.R. 1183.

The automotive industry purchases fasteners from suppliers who use systematic, advanced, manufacturer-approved and monitored, quality assurance systems. In its current form, the Fastener Quality Act would require our fastener suppliers to add redundant and expensive end-of-line testing of samples from discrete fastener lots by accredited, independent laboratories. As the Commerce Department report noted, this obsolete "end-of-line" testing approach resulted in the past in a far lower level of quality compared to current quality assurance systems. In addition, the test report, certification, lot control, and lot traceability requirements detailed in the current Fastener Quality Act are inefficient, do not recognize modern, paperless record keeping, and add substantial costs to manufacturers and consumers without corresponding safety benefits.

The current Fastener Quality Act also places an unnecessary financial and logistical burden on service or replacement part purchasing and distribution. Service parts are generally low volume components, especially when compared to the quantities of the identical components purchased by the manufacturer for vehicle production. For small volume service fasteners, the cost resulting from this law could be more than $100 per fastener, and will result in some service fasteners not being supplied at all. The unavailability of quality service fasteners could cause customers to use a fastener that fits, but does not meet strength or special feature requirements. This will result in a reduction in safety.

The Safety of Critical Use Fasteners in Motor Vehicles is also Promoted by Provisions of the Federal Motor Vehicle Safety Laws

In addition to promoting fastener quality through advanced quality assurance systems, the safety of critical fasteners used in motor vehicle applications is promoted by provisions of the Federal motor vehicle safety laws. Fasteners used in applications covered by Federal Motor

Vehicle Safety Standards issued by the National Highway Traffic Safety Administration (NHTSA) are designed and produced to consistently high levels of quality to permit a motor vehicle manufacturer to certify that every vehicle produced complies with the safety standards. This would include fasteners for safety belt anchorages, fuel tank mounting, steering column energy absorption systems, seat anchorages and brake system mounting. In addition, the Safety Act requires that any vehicles that contain a defect in performance, construction, any component, or material that creates an unreasonable risk to safety must be recalled and remedied.

Actual experience demonstrates how effective the motor vehicle industry's efforts to ensure fastener quality have been. An analysis of the NHTSA safety recall database by NHTSA itself, as reported to the Fastener Quality Workshop conducted by the American Society of Mechanical Engineers in November 1998, revealed that, in the 1994 to 1998 period, only 13 recalls involving only 1/2 million vehicles out of 1,464 recalls involving 79 million vehicles may have involved fastener quality. Moreover, all 13 recalls were initiated voluntarily by the manufacturers, without the necessity of a NHTSA defect or noncompliance investigation. No injuries were involved. Finally, based upon a review of the recalls, even had the current Fastener Quality Act been in effect, the need for these recalls would not have been eliminated, since the recalls either did not involve fastener quality or would not have been detected with "end-of-line" tests. Given that each of the 15 million vehicles sold each year in the U.S. contain between 2,000 and 3,000 fasteners, this represents a maximum of only 13 recalls for the **150** to **225 billion** fasteners used on motor vehicles over a five-year span.

An earlier review of the NHTSA recall files by AIAM revealed a similar experience. Of the 2,600 total recalls of vehicles and motor vehicle equipment that occurred during the ten-year period from 1986 through 1995, only five recalls may have involved fastener quality issues that might have been affected by to the Fastener Quality Act. For this period of time, **300** to **350 billion** fasteners were used on motor vehicles.

The Automotive Industry Urges Prompt Passage of Legislation and Regulations that Address Real Fastener Problems.

The evidence shows that the automotive industry does not have any fastener quality problems. However, the automotive industry supports legislation that would address safety risks from fraudulent misrepresentations of fasteners.

The automotive industry supports the recently introduced Senate and House bills as being consistent with these concepts. These bills target safety-critical fasteners and are directed at deterring the introduction of nonconforming fasteners into commerce and to providing commercial and government customers with greater assurance that fasteners meet stated specifications by prohibiting the fraudulent dissemination of nonconforming fasteners within the United States. The bills also recognize the actions that major end users take in developing fastener standards and quality systems to ensure that only high quality fasteners are used in their products.

Thank you again for the opportunity to provide views on the Fastener Quality Act. I would be pleased to answer any questions you may have.

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Mr. Cockman has been an employee of Ford Motor Company for 32 years; he studied metallurgy at Sir John Cass, School of Metallurgy, London, England. Since 1972 Mr. Cockman has been involved in all aspects of Fastener Technology with Ford Motor Company including fracture analysis, metallurgic and physical testing, joint analysis, quality assurance, fastener assembly methods and fastener standards. Mr. Cockman is a member of Consensus Standards Organizations including the American Society of Mechanical Engineers, ASME B18 committees, The Society of Automotive Engineers, Fasteners Committee, Material Processes & Parts Division and International Harmonization Committee. He is also a member of the United States Technical Advisory Group to the International Standards Organization, ISOTC2, Fastener Committee.

Mr. Cockman is currently working in the Engineering Standards and Systems Engineering department with Ford Motor Company and manages the Corporate Worldwide Fastener Standards System.